



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/975,276	10/10/2001	T. Eric Chomenky	3607-010584	2337

7590

04/07/2004

Nathan J. Prepelka  
700 Koppers Building  
436 Seventh Avenue  
Pittsburgh, PA 15219-1818

EXAMINER

NGUYEN, NAM V

ART UNIT	PAPER NUMBER
----------	--------------

2635

DATE MAILED: 04/07/2004

3

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/975,276

Applicant(s)

CHORNENKY, T. ERIC

Examiner

Nam V Nguyen

Art Unit

2635

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 10 October 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6, 14-25 and 27-32 is/are rejected.
- 7) ☒ Claim(s) 7-13 and 26 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 October 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>2</u> . | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

The application of Chornenky for a "human machine interface" filed October 10, 2001 has been examined.

This application is a CIP of 09/813,744 filed March 21, 2001, which claims benefit of 60/191,068 which is filed March 21, 2000 and claims benefit of 60/197,169 which is filed April 14, 2000.

Claims 1-32 are pending.

### *Drawings*

This application has been filed with informal drawings which are acceptable for examination purposes only. Formal drawings will be required when the application is allowed.

The drawings are objected to under 37 CFR 1.83(a) because they fail to label boxes (34 and 36) in Figure 2; label boxes (42 and 48) in Figures 3, 5-7 and 11; and label boxes in Figures 9 as described in the specification. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d).

The drawings are objected to under 37 CFR 1.83(a) because they fail to show a timer device as claimed in the claim 21 and a positioning system as claimed in the claim 23. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d).

Art Unit: 2635

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### ***Specification***

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

The current abstract using phrase "the present invention" is implied and should be avoided. See MPEP 608.01(b). Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 20 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Art Unit: 2635

Claim 20 recites the limitation "the control device logic circuit" in the claim 20. There are insufficient antecedent basis for these limitation in the claim.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-6, 14-15, 17-18, 22, 24-25 and 27-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Scott et al. (US# 6,484,260) in view of Topping et al. (US# 5,751,835).

Referring to claims 1, 24-25 and 32, Scott et al. disclose a human machine interface (2) (i.e. a security system) and method (column 1 lines 47 to 61; see Figures 1-2), comprising:

A validator controller (30) (i.e. a host system) having a validator status actuator (32) (i.e. a host processing unit) in communication with a validator receiver (38) (i.e. a receiver module) via a validator logic circuit (34) (i.e. a processor circuit), the validator status actuator (32) configured to process and perform actions based upon data signals (41), and the validator receiver (38) configured to receive data signals (41) (column 7 lines 15 to 50; see Figures 1-2);

A data transmitter (6) (i.e. a personal identification) in contact with a human finger and in communication with the validator controller (30) (column 6 lines 29 to column 7 line 13; see Figures 1 and 3-6);

Said transmitter (6) relying upon the physical properties of the finger or surrounding areas;

Wherein the data transmitter (6) transmits a data signal (41), the validator receiver (38) receives the data signal (41), the validator logic circuit (34) processes the received data signal (41), and the validator status actuator (32) performs an action based upon the received data signal (41) (column 7 lines 15 to 50; column 10 line 58 to column 12 line 6; see Figures 1-2 and 7-8).

However, Scott et al. did not explicitly disclose a data transmitter in contact with a human nail.

In the same field of endeavor of recognizing individuals biometric identification system, Topping et al. teach that a data transmitter (450) (i.e. a CCD or photodiode array sensor) in contact with a human nail (300') (i.e. fingernail) (column 7 lines 18 to 67; see Figures 7-8) in order to obtain the best transmission strategy for transmitting a unique identification of an individual subject.

One of ordinary skilled in the art recognizes the need to analyzes fingernail beds of individual of Topping et al. in a biometric sensor system of Scott et al. because Scott et al. suggest it is desired to provide that a charge coupled device optical sensor having sufficient resolution to provide a signal indicative of a fingerprint image (column 2 line 1 to 14) and Topping et al. teach that the physical and dimensional characteristics of the interface between nail bed and the underside of nail can be employed to uniquely identify individual and using a

Art Unit: 2635

area-type charge coupled device sensor to integrate intensity value of individual pixels serially (column 6 lines 3 to 9; see Figures 7-8) in order to digitized and stored for data analysis.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to analyzes fingernail beds of individual of Topping et al. in a biometric sensor system of Scott et al. with the motivation for doing so would have been to provide an apparatus for identification of individual by the nail beds of their fingernails.

Referring to claim 2, Scott et al. in view of Topping et al. disclose the human machine interface of claim 1, Scott et al. disclose a direct physical connection (i.e. hard-wire) element between the validator receiver (38) and the data transmitter (6); wherein the data signal (41) is transmitted through the direct physical connection element (column 7 lines 35 to 50).

Referring to claim 3, Scott et al. in view of Topping et al. disclose the human machine interface of claim 1, Scott et al. disclose wherein the data transmitter comprises:

A capacitance plate (15) (i.e. a platen of a charge coupled device) secured to the human finger; and a circuit return conductor (not shown) (column 6 lines 41 to 53; column 8 lines 15 to 29; see Figures 1-6).

Referring to claims 4-5, Scott et al. in view of Topping et al. disclose the human machine interface of claim 1, Scott et al. disclose further comprises:

A data transmitter power source (i.e. power supply) powering the data transmitter (6) (column 5 lines 16 to 26; column 6 lines 29 to 40; column 8 lines 15 to 29; see Figures 1 and 4).

Referring to claims 6 and 27, Scott et al. in view of Topping et al. disclose the human machine interface of claims 1 and 25, Scott et al. wherein the validator controller (30) further comprises a validator emitter (40) (i.e. a transmitter module) configured to emit signals towards the data transmitter (6) (column 7 lines 15 to 23; column 10 line 58 to column 11 line 33; see Figures 1 and 7).

Referring to claim 14, Scott et al. in view of Topping et al. disclose the human machine interface of claim 6, Scott et al. wherein the data transmitter (6) further comprises at least one capacitance plate (15) (i.e. a platen) secured to the human finger (column 6 lines 41 to 53; column 13 lines 5 to 12; see Figure 1).

Referring to claim 15, Scott et al. in view of Topping et al. disclose the human machine interface of claim 14, Scott et al. wherein the data transmitter further comprises an inductor in communication with the at least one capacitance plate and configured to emit data signals towards the validator receiver.

Referring to claims 17-18, Scott et al. in view of Topping et al. disclose the human machine interface of claim 1, Scott et al. disclose further comprising: a data transmitter protective layer (44) (i.e. housing) covering and protecting the data transmitter (6); wherein the protective layer does not interfere with communication of data signals between the data



Art Unit: 2635

transmitter (6) and the validator controller (30) (column 2 lines 44 to 63; column 8 lines 14 to 39; see Figures 4A to 4D).

Referring to claim 22, Scott et al. in view of Topping et al. disclose the human machine interface of claim 1, Scott et al. disclose wherein the data signal (41) is encrypted prior to communication from the data transmitter (6) to the validator controller (30) (column 2 lines 15 to 39; column 7 lines 5 to 13; see Figure 1).

Referring to claim 28, Scott et al. in view of Topping et al. disclose the human machine interface of claim 27, Topping et al. disclose further comprising: a directional reflector configured to reflect the signals from the validator emitter only when received at a predetermined angle; and an electronic shutter adjacent the directional reflector and configured to modulate the data signal; wherein the external signal is received through the electronic shutter and by the reflector, and the data signal is reflected and modulated by the data transmitter, towards the validator controller (column 7 lines 28 to 67; see Figure 8).

Referring to claim 29, Scott et al. in view of Topping et al. disclose the human machine interface of claim 25, Scott et al. disclose wherein the data transmitter (6) further comprises a nail digital chip (18) (i.e. a processor circuit), the nail digital chip (18) containing at least one computer program (column 7 lines 5 to 14; column 8 line 66 to column 9 line 7; see Figure 1).

Art Unit: 2635

Referring to claims 30 and 31, Scott et al. in view of Topping et al. disclose the human machine interface of claim 25, Topping et al. disclose wherein the data signal communicated from the data transmitter to the validator controller is a correlation between a first spatial point associated with the data transmitter and a second spatial point; wherein the first spatial point is adjacent a user's nail and the second spatial point is on a screened monitor (column 7 lines 28 to 52; see Figure 8).

Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Scott et al. (US# 6,484,260) in view of Topping et al. (US# 5,751,835) as applied to claim 14, and in further view of Darrow et al. (US# 6,201,980).

Referring to claim 15, Scott et al. in view of Topping et al. disclose the human machine interface of claim 14, however, Scott et al. in view of Topping et al. did not explicitly disclose wherein the data transmitter further comprises an inductor in communication with the at least one capacitance plate and configured to emit data signals towards the validator receiver.

In the same field of endeavor a biometric sensor system, Darrow et al. disclose the data transmitter (101 and 102) (i.e. assemblies of a micro electro mechanical system) further comprises an inductor (106) (i.e. a planar inductor coil) in communication with the at least one capacitance plate (105) (i.e. conductive membrane) and configured to emit data signals towards the validator receiver (18) (i.e. a telemetry device) (see Figures 1 and 6) in order to transmit signals of a measurement of the concentration of a chemical analyte of interest.

At the time the invention, it would have been obvious to a person of ordinary skill in the art to recognize using an inductor coupled to at least one capacitance plate and to transmit data signal to a telemetry device of Darrow et al. in a platen of a charge coupled device sensor connect to a transmitter module to transmit signals to a host system of Scott et al. in view of Topping et al. because using an inductor to configured to transmit data signal would improve the reliable communication to identify an individual biometric that has been shown to be desirable in the personal identification system for providing secure access to a host facility includes a biometric sensor device of Scott et al. in view of Topping et al.

Claims 16 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Scott et al. (US# 6,484,260) in view of Topping et al. (US# 5,751,835) as applied to claim 1, and in further view of North et al. (US# 4,614,366).

Referring to claim 16, Scott et al. in view of Topping et al. disclose the human machine interface of claim 1, however, Scott et al. in view of Topping et al. did not explicitly disclose further comprising a recording device, the recording device configured to log specific events occurring within the human machine interface and associated devices.

In the same field of endeavor a biometric identification system, North et al. disclose a recording device (31) (i.e. a reference computer), the recording device (31) configured to log specific events occurring within the human machine interface and associated devices (column 7 lines 35 to 50; see Figure 1) in order to track the patient through the medical facility.

Art Unit: 2635

At the time the invention, it would have been obvious to a person of ordinary skill in the art to recognize using a reference computer to record the nature of activity to which a patient is subjected of North et al. in a host system include a host facility to store user's ID code and public key as part of the user's account record of Scott et al. in view of Topping et al. because using a computer to record specific events of an identification device would improve a convenient way to track a patient through the medical facility that has been shown to be desirable in the personal identification system for providing secure access to a host facility of Scott et al. in view of Topping et al.

Referring to claim 19, Scott et al. in view of Topping et al. disclose the human machine interface of claim 1, North et al. disclose further comprising an adhesive layer (16) (i.e. a coat of sealant) between the data transmitter (20) (i.e. a bar scanning probe) and the human nail (11) (i.e. nail surface), the adhesive layer (16) configured to non-permanently secure the data transmitter (2) to the human nail (11) (column 5 lines 34 to 44; column 6 lines 17 to 28; see Figures 1-2).

Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Scott et al. (US# 6,484,260) in view of Topping et al. (US# 5,751,835) as applied to claim 1, and in further view of Cambier et al. (US# 6,532,298).

Referring to claim 20, Scott et al. in view of Topping et al. disclose the human machine interface of claim 1, however, Scott et al. in view of Topping et al. did not explicitly disclose wherein the validator status actuator communicates with a controllable device logic circuit in a

Art Unit: 2635

controllable device, the control device logic circuit in communication with a controllable device and configured to control the controllable device.

In the same field of endeavor a biometric identification system, Cambier et al. disclose a validator status actuator (210) (i.e. a microprocessor in the imager 100) communicates with a controllable device logic circuit (960) (i.e. a microprocessor of a controller system 940) in a controllable device (940) (i.e. a controller system), the control device logic circuit (210) in communication with a controllable device (940) and configured to control the controllable device (940) (column 15 lines 50 to column 16 line 11; see Figure 12) in order to grant an access to the vehicle or asset and to initiates commands to unlock the vehicle.

At the time the invention, it would have been obvious to a person of ordinary skill in the art to recognize connecting a microprocessor in the imager to a microprocessor of a controller system to initiates commands of the vehicle of Cambier et al. in a host processing unit of a host system connects to a trusted third party to provides services for several host systems of Scott et al. in view of Topping et al. because using a circuitry of an imager to control the circuitry of a controller system would improve a convenient way to control commands of a device remotely that has been shown to be desirable in the personal identification system for providing secure access to a host facility of Scott et al. in view of Topping et al.

Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Scott et al. (US# 6,484,260) in view of Topping et al. (US# 5,751,835) as applied to claim 1, and in further view of Matchett et al. (US# 5,229,764).

Art Unit: 2635

Referring to claim 21, Scott et al. in view of Topping et al. disclose the human machine interface of claim 1, however, Scott et al. in view of Topping et al. did not explicitly disclose further comprising a timer device in communication with one of the validator controller and the data transmitter and configured to associate a time with an event.

In the same field of endeavor a biometric authentication system, Matchett et al. disclose a timer device (120) (i.e. a timer circuit) in communication with one of the validator controller (100) (i.e. a system) and the data transmitter (C) (i.e. a biometric input signal) and configured to associate a time with an event (column 5 lines 16 to column 6 line 28; see Figure 1) in order to collect biometric input signal and compare with a reference data periodically and intermittently.

At the time the invention, it would have been obvious to a person of ordinary skill in the art to recognize using a timer circuit in a system of Matchett et al. in a host systems of Scott et al. in view of Topping et al. because using a timer circuit would improve a convenient way to control commands of a device remotely with time that has been shown to be desirable in the personal identification system for providing secure access to a host facility of Scott et al. in view of Topping et al.

Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Scott et al. (US# 6,484,260) in view of Topping et al. (US# 5,751,835) as applied to claim 1, and in further view of Dixit et al. (US# 6,449,472).

Referring to claim 23, Scott et al. in view of Topping et al. disclose the human machine interface of claim 1, however, Scott et al. in view of Topping et al. did not explicitly disclose

Art Unit: 2635

further comprising a positioning system integrated with the human machine interface and configured to provide human machine interface location information to an external recipient.

In the same field of endeavor a biometric authentication system, Matched et al. disclose a positioning system (72) (i.e. global positioning system) integrated with the human machine interface (10) (i.e. system) and configured to provide human machine interface (10) location information to an external recipient (88) (i.e. dispatcher) (column 3 line 60 to 67; see Figure 1) in order to provide for remote assistance summoning of rescue authorities.

At the time the invention, it would have been obvious to a person of ordinary skill in the art to recognize using a global positioning system in a system of Dixit et al. in a host systems of Scott et al. in view of Topping et al. because using a global positioning system would provide a position of a system to control commands of a system remotely that has been shown to be desirable in the personal identification system of Scott et al. in view of Topping et al.

#### *Allowable Subject Matter*

Claims 7-13, 26 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Referring to claim 7, the following is a statement of reasons for the indication of allowable subject matter: the prior art fail to suggest limitations wherein the data transmitter further comprises:

Art Unit: 2635

A nail digital chip configured to communicate with the validator receiver; and a nail solar cell configured to receive signals from the validator emitter and power the data transmitter.

Referring to claim 26, the following is a statement of reasons for the indication of allowable subject matter: the prior art fail to suggest limitations wherein the data transmitter further includes a sensor in communication with a nail analog chip, the nail analog chip in communication with a nail digital chip; wherein the nail digital chip is configured to emit a data signal from the data transmitter towards the validator controller, the data signal based upon one of the relative position, state, motion and acceleration of the nail or surrounding areas, with respect to an external point.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Hsu et al. (US# 6,038,666) disclose a remote identify verification technique using personal identification device.



Art Unit: 2635

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nam V Nguyen whose telephone number is 703-305-3867. The examiner can normally be reached on Mon-Fri, 8:30AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Horabik can be reached on 703-305-4704. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

Nam Nguyen  
April 1, 2004



MICHAEL HORABIK  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600

